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EDUCATION

- Sept 1982 Oregon State University, College of Oceanography, Corvallis, Oregon.
Dec 1987 Ph.D. in Physical Oceanography, December 1987. Thesis advisor: Roland A. de Szoek. Thesis title: Response to wind stress & heating in the N Pacific sfc. layer
- Sept 1978 University of Michigan, College of Engineering, Ann Arbor, Michigan
May 1982 B.S.E. in Engineering Science with honors, May 1982.

EXPERIENCE

- July 2012 Dean of Research, Naval Postgraduate School, Monterey, California
Present
- Oct 2008 Chairman, Department of Oceanography, Naval Postgraduate School, Monterey, California
July 2012
- July 2008 Professor of Oceanography, Naval Postgraduate School, Monterey, California
Present
- July 1997 Adjunct Professor/Research Associate, University of California Santa Cruz. Instructor for graduate-level oceanography course. Researcher using shore-based HF radar.
Present
- July 1997 Associate Professor of Oceanography, Naval Postgraduate School, Monterey, California
July 2008
- July 1991 Assistant Professor of Oceanography, Naval Postgraduate School, Monterey, California.
July 1997
- Jan 1991 Assistant Research Oceanographer, Scripps Institution of Oceanography, La Jolla, California. Conducted research using satellite-tracked drifters to study the horizontal structure of temperature and current in the northeast Pacific Ocean. Served as Global Drifter Center manager for the World Ocean Circulation Experiment (WOCE).
June 1991
- Dec 1987 Postdoctoral Research Oceanographer, Scripps Institution of Oceanography, La Jolla, California. Conducted research using satellite-tracked drifters to study offshore-flowing, cold-water jets off the coast of California and horizontal current and temperature structure in the northeast Pacific Ocean.
Jan 1991
- Sept 1982 Graduate Research Assistant, Physical Oceanography, Oregon State University, Corvallis. Conducted research in air-sea interaction using upper-ocean measurements of currents and temperatures and surface meteorological observations. Presented results (oral and written) at internationally attended conferences.
Dec 1987
- May 1980 Research Assistant, Great Lakes Environmental Research Laboratory, Ann Arbor, MI.
Aug 1982 Performed computer programming and field duties in support of research on the circulation of the Great Lakes and dispersion of oil and toxic chemicals.
- Jan 1980 Research Assistant, Dept. of Atmospheric and Oceanic Sciences, Univ. of Michigan.
May 1980 Assisted in data reduction of current meter records from Lake Erie surf zone.

AWARDS/NATIONAL COMMITTEES

- June 2012 AMS Editor's Award for Excellence for 2013
- Feb 2009 President, Monterey Bay Crescent Ocean Research Consortium (MBCORC)
- Dec 2008 Associate Editor, AMS Journal Atmospheric and Oceanic Technology
- April 2008 Named to California Ocean Protection Council's (OPC) Science Advisory Team
- March 2008 Monterey Bay National Marine Sanctuary Annual Regional Science Award Recipient
- Dec 2005 President, Central & N. Cal. Ocean Observing System (CeNCOOS) Governing Council

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| June | 2015 | NSF Mentoring Physical Oceanography Women for Increased Retention (MPOWIR)- Founding Steering Committee Member |
| Dec | 2004 | Named as member of the CA Marine Life Protection Act Science Advisory Team |
| Sept. | 2003 | Chair, Ocean.US Surface Current Mapping Initiative Steering Committee |
| Nov | 2001 | Member, Ocean.US Community Workshop Steering Committee |
| Aug | 1997 | Editor's Excellence in Reviewing Award, Journal Geophysical Research |
| Jan | 1997 | AMS Committee on Meteorology & Oceanography of the Coastal Zone |
| | 1994 | Teaching (Oct) and Research (April) Recognition Awards, Naval Postgraduate School |
| Dec | 1986 | Best Student Paper Award for Oceanography AGU Fall Meeting |

PUBLICATIONS IN REFEREED JOURNALS

- Brink, K.H., R.C. Beardsley, J.D. Paduan, R. Limeburner, M. Caruso, and J.G. Sires, 2000: A view of the 1993-1994 California Current based on surface drifters, RAFOS floats, and remotely sensed data. *J. Geophys. Res.*, **105**, 8575-8604.
- Chao, Y., Z. Li, J. Farrara, J.C. McWilliams, J. Bellingham, X. Capet, F. Chavez, J.-K. Choi, R. Davis, J. Doyle, D. Fratantoni, P. Li, P. Marchesiello, M. Moline, J.D. Paduan, and S. Ramp, 2008: Development, implementation and evaluation of a data-assimilative ocean forecasting system off the central California coast. *Deep-Sea Res.*, doi:10.1016/j.dsr2.2008.08.011.
- , Z.Li, J. Kindle, J. Paduan, and F. Chavez, 2003: A high-resolution surface vector wind product for coastal oceans: blending satellite scatterometer measurements with regional mesoscale atmospheric model simulations. *Geophys. Res. Letters*. **30**, 13-1 to 13-4.
- Chen, Y-R., J.D. Paduan, M.S. Cook, L.Z.H. Chuang, Y-J. Chung, 2021: Observations of surface currents and tidal variability off of northeastern Taiwan from shore-based high frequency radar. MDPI Special Issue on Remote Sensing Applications in Ocean Observation, *Remote Sens.*, **13**(17), 3438; <https://doi.org/10.3390/rs13173438>.
- Coulliette, C., F. Lekien, J. Marsden, G. Haller, and J. Paduan, 2007: Optimal pollution release in Monterey Bay based on nonlinear analysis of coastal radar data. *Environmental Science and Technology*, **41**, (18), 6562 - 6572, 10.1021/es0630691.
- Fernandez, D.M., H.C. Graber, J.D. Paduan, and D.E. Barrick, 1997: Mapping wind direction with HF radar. *Oceanography*, **10**, 93-95.
- , L.A. Meadows, J.F. Vesecky, C.C. Teague, J.D. Paduan, and P. Hansen, 2000: Surface current measurements by HF radar in fresh water lakes. *J. Oceanic Engin.*, **25**, 458-471.
- Frolov, S., J.D. Paduan, M.S. Cook, and J. Bellingham, 2012: Improved statistical prediction of surface currents based on historic HF-radar observations. *Ocean Dynamics*, DOI 10.1007/s10236-012-0553-5.
- Gačić, M., V. Kovacevic, S. Cosoli, A. Mazzoldi, J.D. Paduan, I. Mosquera, and S. Yari, 2009: Surface current patterns in front of the Venice Lagoon. *Estuarine, Coastal & Shelf Science*, 10.1016/j.ecss.2009.02.012.
- , V. Kovacevic, A. Mazzoldi, J. Paduan, J. Arena, F. Mancero, I. Mosquera, G. Gelsi, and G. Arcari, 2002: Measuring water exchange between the Venetian Lagoon and the open sea. *EOS, Transactions American Geophysical Union*, **83**, 217-222.

- Gough, M., A. Reniers, J. Olascoaga, B. Haus, J. MacMahan, J.D. Paduan, and C. Halle, 2016: Lagrangian Coherent Structures in a Coastal Upwelling Environment. *Cont. Shelf Res.*, **128**, 36-50, DOI: 10.1016/j.csr.2016.09.007.
- Kaplan, D. M., C. Halle, J. Paduan, and J. L. Largier, 2009: Surface currents during anomalous upwelling seasons off central California. *J. Geophys. Res.*, doi:10.1029/2009JC005382.
- Kelly, K.A., R.C. Beardsley, R. Limeburner, K.H. Brink, J.D. Paduan, and T.K. Chereskin, 1998: Variability of the near-surface eddy kinetic energy in the California Current based on altimetric, drifter, and moored current data. *J. Geophys. Res.*, **103**, 13067-13083.
- Kim, S.Y., E.J. Terrill, B.D. Cornuelle, B. Jones, L. Washburn, M.A. Moline, J.D. Paduan, N. Garfield, J. Largier, G. Crawford, and P.M. Kosro, 2011: Mapping the U.S. west coast surface circulation: A multiyear analysis of high-frequency radar observations. *J. Geophys. Res.*, **116**, C03011, doi:10.1029/2010JC006669.
- , B.D. Cornuelle, E.J. Terrill, B. Jones, L. Washburn, M.A. Moline, J.D. Paduan, N. Garfield, J.L. Largier, G. Crawford, and P. M. Kosro, 2013: Poleward propagating subinertial alongshore surface currents off the U.S. West Coast. *J. Geophys. Res.*, **118**, 6791-68-06, doi: 10.1002/jgre.20400.
- Kindle, J.C., R. Hodur, S. deRada, J. Paduan, L.K. Rosenfeld, and F. Chavez, 2002: A COAMPS™ reanalysis for the eastern Pacific: properties of the diurnal sea breeze along the central California coast. *Geophys. Res. Letters*, **29**(24), 2203, doi:10.1029/2002GL015566.
- Kohut, J.T., S.M. Glenn, and J.D. Paduan, 2006: Inner-shelf response to tropical storm Floyd. *J. Geophys. Res.*, **111**, c09S91, doi:10.1029/2003JC002173.
- Laws, K. D.M. Fernandez, and J.D. Paduan, 2000: Simulation-Based Evaluations of HF Radar Ocean Current Algorithms. *J. Oceanic Engin.*, **25**, 481-491.
- , J.D. Paduan, and J. Vesecky, 2010: Estimation and assessment of errors in high-frequency radar ocean current measurements. *J. Oceanic and Atmos. Tech.*, **27**, 10.1175/2009JTECHO658.1.
- Lipphardt, B.L. Jr., A.D. Kirwan, Jr., C.E. Grosch, J.K. Lewis, and J.D. Paduan, 2000: Blending HF radar and model velocities in Monterey Bay through normal mode analysis. *J. Geophys. Res.*, **105**, 3425-3450.
- , D. Small, A.D. Kirwan, Jr., W. Wiggins, K. Ide, C.E. Grosch, and J.D. Paduan, 2006: Synoptic Lagrangian maps: Application to surface transport in Monterey Bay. *J. Mar. Res.*, **64**(2), 221-247.
- Niiler, P.P., J. Filloux, W.T. Liu, R.M. Samelson, J.D. Paduan, C.A. Paulson, 1993: Wind-forced variability of the deep eastern north Pacific: Theory and relationship to seafloor pressure and abyssal currents. *J. Geophys. Res.*, **98**, 22589-22602.
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- , —, and J.G. Richman, 1987: The Balances of Heat and Momentum at 33.5° N, 127° W in the Upper Ocean during MILDEX. *J. Geophys. Res.*, **93**, 8147-8160.
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- , and H.C. Graber, 1997: Introduction to high frequency radar: Reality and myth. *Oceanography*, **10**, 36-39.
- , K.C. Kim, M.S. Cook, and F.P. Chavez, 2006: Calibration and validation of direction-finding high frequency radar ocean surface current observations. *IEEE J. Oceanic Engin.*, 10.1109/JOE.2006.886195, 862-875.
- , P.-M. Kosro, and S.M. Glenn, 2004: A national coastal ocean surface current mapping system for the United States. *Marine Tech. Soc.*, **38**, 102-108.
- , and P.P. Niiler, 1990: A Lagrangian description of motion in northern California coastal transition filaments. *J. Geophys. Res.*, **95**, 18095-18109.
- , and P.P. Niiler, 1993: The structure of velocity and temperature in the northeast Pacific as measured with Lagrangian drifters in fall 1987. *J. Phys. Oceanogr.*, **23**, 585-600.
- , and L.K. Rosenfeld, 1996: Remotely sensed surface currents in Monterey Bay from shore-based HF radar (CODAR). *J. Geophys. Res.*, **101**, 20669-20686.
- , and I. Shulman, 2004: CODAR data assimilation in the Monterey Bay area. *J. Geophys Res.*, **109**, C07S09, doi: 10.1029/2003JC001949.
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- , L.K. Rosenfeld, and J.D. Paduan, 1998: Observations of the internal tide in Monterey Submarine Canyon. *J. Phys. Oceanogr.*, **28**, 1873-1903.
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- Ramp, S.R., J.D. Paduan, I. Shulman, J. Kindle, F.L. Bahr, and F.P. Chavez, 2004: Observations of upwelling and relaxation events in the northern Monterey Bay during August 2000. *J. Geophys. Res.*, **110**, C07013, doi:10.1029/2004JC002538.

- , R.E. Davis, N.E. Leonard, I. Shulman, Y. Chao, A.R. Robinson, J. Marsden, P.F.J. Lermusiaux, D. Fratantoni, J.D. Paduan, F.P. Chavez, F.L. Bahr, S. Liang, W. Leslie, and Z. Li, 2009: Preparing to predict: The Second Autonomous Ocean Sampling Network (AOSN-II) experiment in the Monterey Bay. *Deep-Sea Res.*, doi:10.1016/j.dsr2.2008.08.013.
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- , A.M. Fischer, R.M. Kudela, M.A. McManus, J.S. Myers, J.D. Paduan, C.M. Ruhsam, C.B. Woodson, and Y. Zhang, 2010: Recurrent frontal slick patterns in a coastal ocean upwelling shadow. *J. Geophys. Res.*, **115**, C12070, doi:10.1029/2010JC006398.
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- Solabarrieta Odriozola, L., S. Frolov, M. Cook, J.D. Paduan, A. Rubio, M. González, J. Mader, and G. Charria, 2016: Skill assessment of HF radar-derived products for Lagrangian simulations in the Bay of Biscay. *J. Atmos. & Oceanic Tech.*, **33**, 2585-2597.
- Shulman, I., S. Haddock, D. McGillicuddy, J. Paduan, and P. Bissett, 2003: Numerical modeling of bioluminescence distributions in the coastal ocean. *J. Oceanic & Atmos. Tech.*, **20**, 1060-1068.
- , K. Kindle, P. Martin, S. deRada, J. Doyle, B. Penta, S. Anderson, F. Chavez, J. Paduan, and S. Ramp, 2007: Modeling of upwelling/relaxation events with the Navy Coastal Ocean Model. *J. Geophys. Res.*, **112**, doi: 10.1029/2006JC003946.
- , J.D. Paduan, 2008: Assimilation of HF radar-derived radials and total currents in the Monterey Bay area. *Deep-Sea Res.*, doi:10.1016/j.dsr2.2008.08.004.
- , C.-R. Wu, J.K. Lewis, J.D. Paduan, L.K. Rosenfeld, S.R. Ramp, M.S. Cook, J.D. Kindle, D.-S. Ko, 2000: Development of the high resolution, data assimilating numerical model of the Monterey Bay. In *Estuarine and Coastal Modeling*, Spaulding, M.L. and H. Lee Butler, eds., 980-994.
- , —, —, —, L.K. Rosenfeld, J.D. Kindle, S.R. Ramp, and C.A. Collins, 2002: High resolution modeling and data assimilation in the Monterey Bay area. *Cont. Shelf Res.*, **22**, 1129-1151.

- Wang, Q., J.A. Kalogiros, S.R. Ramp, J.D. Paduan, G. Buzorius, and H. Jonsson, 2011: Wind stress and coastal upwelling in the area of Monterey Bay observed during AOSN-II. *J. Phys Oc.*, **41**, 857-877, DOI: 10.1175/2010JPO4305.1.
- Wang, X., Y. Chao, C. Dong, J. Farrara, Z. Li, J.C. McWilliams, J.D. Paduan, and L.K. Rosenfeld, 2008: Modeling Tides in Monterey Bay, California. *Deep-Sea Res.*, doi:10.1016/j.dsr2.2008.08.012.
- Zhou, M., J.D. Paduan, and P.P. Niiler, 2000: Surface currents in the Canary Basin from drifter observations. *J. Geophys Res.*, **105**, 21893-21911.

PUBLISHED PROCEEDINGS/TECHNICAL REPORTS

- Barrick, D., R. Cheng, N. Garfield, J. Paduan, P. Lilleboe, J. Gartner, and L. Pederson, 2000: Toward bay/harbor circulation model improvement incorporating HF radar data based on SeaSonde deployments on San Francisco Bay. *Proceedings, IEEE OCEANS-2000*, 5 pp.
- Cook, M.S., and J.D. Paduan, 2003: Processing HF radar data using the HFRadarmap software system. *Radiowave Oceanography the First International Workshop*, University of Miami, Rosentiel School of Marine and Atmospheric Science, 11-16.
- Fernandez, D.M., and J.D. Paduan, 1996: Simultaneous CODAR and OSCAR Measurements of Ocean Surface Currents in Monterey Bay. *Proceedings, IEEE IGARSS '96*, Lincoln, Neb., vol. 3, 1746-1750.
- , J.F. Vesecky, C.C. Teague, J.D. Paduan, and K.E. Laws, 1998: Ship detection with high-frequency phased-array and direction-finding radar systems. *Proceedings, IEEE Inter. Geoscience and Remote Sensing Symposium*, Seattle, July 1998, paper A08-11.
- , K.E. Laws, and J.D. Paduan, 1999: High-Frequency Radar Simulations. *Proceedings of the IEEE Sixth Working Conference on Current Measurement*, 9-13.
- Jenkins, S., J. Paduan, P. Roberts, D. Schlenk, and J. Weis, “Management of Brine Discharges to Coastal Waters Recommendations of a Science Advisory Panel.” Technical Report 694, Southern California Coastal Water Research Project, March 2012, 101 pp.
- Kim, S.Y., E.J. Terrill, B.D. Cornuelle, B. Jones, L. Washburn, M.A. Moline, J.D. Paduan, N. Garfield, J. Largier, G. Crawford, and P.M. Kosro, “Sustained observations of mesoscale and sub-mesoscale surface circulation off the U.S. west coast.” *Proceedings, MTS/IEEE OCEANS 12*, Yeosu, Korea, [10.1109/OCEANS-Yeosu.2012.6263380](https://doi.org/10.1109/OCEANS-Yeosu.2012.6263380), 2012.
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- , J.D. Paduan, and D.M. Fernandez, 2003: Effect of Stokes drift on HF radar measurements. *Radiowave Oceanography the First International Workshop*, University of Miami, Rosentiel School of Marine and Atmospheric Science, 49-55.
- , J.F. Vesecky, and J.D. Paduan, 2010: High frequency radar for coastal marine monitoring of currents and vessels. *Proceedings, Waterside Security Conference WSS2010*, IEEE Conf #17662, 3-5 November, Marina di Carrara, Italy, 5 pp.

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- , —, and —, 2011: Error assessment of HF radar-based ocean current measurements: an error model based on sub-period measurement variance. *Proceedings, IEEE/OES/SWTM 10th Working Conference on Current Measurement Technology*, IEEE Catalog #CFP11CWT-PRT, 21-23 March, Monterey, California, 70-76.
- Lipphardt, B.L. Jr., A.D. Kirwan, Jr., C.E. Grosch, and J.D. Paduan, 2003: Normal mode analysis of velocity gradient fields in Monterey Bay. *Radiowave Oceanography the First International Workshop*, University of Miami, Rosentiel School of Marine and Atmospheric Science, 115-119.
- Luqi, D. Boger, J. Paduan, R. Dell, G. Dinolt, D. Fouts, R. Buettner, J. Piombo, S. Miller, J. Newman, R. Kelly, D. Dampier, J. Drummond, V. Berzins, A. Hernandez, J. Monaco, D. Davis, N. Bjørner, D. Lange, B. Smith, R. Durbin, N. Weaver, B. Noble, S. Hayne, A. Akil, S. Runde, S. Gallup, W. Roof, C. Fitzpatrick, I. Balogh, T. Emmersen, P. Tortora, J. Comey, B. Bingham, B. O'Halloran, B. Wood, 20th Monterey Workshop on Cyber. Technical Report, Naval Postgraduate School, NPS-CAG-19-001 and NPS-CS-19-002, June 2019, 183 pp.
- Ly, L., P. Luong, J.D. Paduan, and D. Koracin, 1999: Response of the Monterey Bay region to wind forcing by an atmospheric model. *Proceedings, American Meteorological Society's Third Conference on Coastal Atmospheric and Oceanic Prediction and Processes*, New Orleans, LA, 3-5 November, pg. 76-79.
- , W.P. O'Connor, and J.D. Paduan, 2000: A barotropic simulation of semi-diurnal and diurnal tides for the Monterey Bay region. in *Hydraulic Engineering Software VIII*, Blain, W.R. and C.A. Brebbia, Ed., WIT Press, 155-169.
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- , and L.K. Atkinson, 2004: The Ocean.US Surface Current Initiative. *Eos Trans. AGU*, 84 (52), Ocean Sci. Meeting Suppl, Abstract OS41G-08.
- , D. Barrick, D. Fernandez, Z. Hallock, and C. Teague, 2001: Improving the accuracy of coastal HF radar current mapping. *Hydro International*, 5, 26-29.
- , M.S. Cook, D.M. Fernandez, C. Whelan, I. Shulman, and C.-R. Wu, 2003: Statistics and data assimilation results from long-term HF radar-derived surface currents around Monterey

- Bay, California. *Radiowave Oceanography the First International Workshop*, University of Miami, Roseniel School of Marine and Atmospheric Science, 120-127.
- , S. Benson, K. Bruland, F. Chavez, D. Costa, D. Croll, A. DeVogelaere, C. Edwards, G. Griggs, C. King, R. Kudela, J. Harvey, B. Lipphardt, S. Lonhart, P. Mantey, B. Marinovic, M. McManus, L. Rosenfeld, M. Silver, J. Vesecky, 2003: Ocean observing and modeling system developments around Monterey Bay. *Proceedings, California and the World Oceans* Santa Barbara, California, October 2002, 967-976.
- , and H.C. Graber, 2003: Radiowave Oceanography-an overview of the First International Workshop (ROW-1). *Radiowave Oceanography the First International Workshop*, University of Miami, Roseniel School of Marine and Atmospheric Science, 5-11.
- , D. Kaplan, N. Garfield, and J. Largier, 2007: Surface current mapping with high-frequency radar: building the tools for hazardous spill response. *Ecosystem Observations 2006*, Monterey Bay National Marine Sanctuary, Monterey, California, 13-14.
- , J. O'Donnell, A. Allen, P.M. Kosro, S. Glenn, M. Bushnell, D. Musgrave, N. Shay, L. Washburn, and M. Luther, 2004: Surface current mapping in U.S. coastal waters: Implementation of a national system. *Ocean.US*, Arlington, VA, 22 pp.
- , E.T. Petrucio, D.E. Barrick, and B.J. Lipa, 1995: Surface currents within and offshore of Monterey Bay as mapped by a multiple-site HF radar (CODAR) network. *Proceedings of the IEEE Fifth Working Conference on Current Measurement*, 137-142.
- , M. Zhou, and P.P. Niiler, 1995: Surface currents in the Canary Basin from drifter observations. *International WOCE Newletter*, #20, 13-15.
- , M.H. Pickett, and M.S. Cook, 1996: Comparison of drifting buoy and HF radar (CODAR) ocean surface currents in Monterey Bay, CA. *NOAA Tech. Rep.*, MBNMS 96-01, 35pp.
- , M.S. Cook, and D.M. Fernandez, 1997: Two-dimensional diurnal to monthly period surface currents in Monterey Bay from CODAR-type HF radar. *Proceedings, IEEE Inter. Geoscience and Remote Sensing Symposium*, Singapore, August 1997, pp. 1814-1816.
- , R. Delgado, J.F. Vesecky, Y. Fernandez, J. Diada, and C.C. Teague, 1999: Mapping Coastal Winds with HF Radar. *Proceedings of the IEEE Sixth Working Conference on Current Measurement*, 28-32.
- , L.K. Rosenfeld, S.R. Ramp, F. Chavez, C.S. Chiu, and C.A. Collins, 1999: Development and maintenance of the ICON observing system in Monterey Bay. *Proceedings, American Meteorological Society's Third Conference on Coastal Atmospheric and Oceanic Prediction and Processes*, New Orleans, LA, 3-5 November, pg. 226-231.
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